HOUSE STUDY COMMITTEE ON CANNABIS WASTE AND RECYCLING

International/Domestic Opportunities and Regulatory & Compliance Issues

INTRODUCTION

Chairwoman Rep. Mesha Mainor
Rep. John Corbett
Rep. Mack Jackson
Rep. Alan Powell
Rep. Dale Washburn

Reginald L. Snyder

- Partner at Taylor English Duma LLP
- Practice Group Leader of Firm's Cannabis Industry Practice Group
- Practice Group Leader of Firm's Consumer/Products/Premises Liability Practice Group
- Written and published over a dozen articles regarding various aspects of the cannabis industry, including federal and state legislation

Taylor English Duma LLP

- Full service law firm
- 175 lawyers
- Offices in 15 different states and 23 different cities
- Represent a cannabis and psylocibin company
- Represent a private equity fund that invests in cannabis companies
- Represented property owners in Florida in real estate transactions with cannabis companies

CANNABIS WASTE AND RECYCLING

The waste and recycling industry offers cannabis companies an opportunity to generate revenue from the waste products generated from processing cannabis plants, and it offers enterprising entrepreneurs an opportunity to enter an emerging market by creating solutions for reusing and repurposing cannabis waste material.

Difference Between Marijuana and Hemp

- Marijuana contains Tetrahydrocannabinol ("THC"), so it is currently classified as a Schedule 1 Narcotic in the Drug and Enforcement Administration's schedule of Controlled Substances—the highest restriction possible
- Hemp contains very little or no THC, and under the 2018 Agriculture Improvement Act, the federal government removed hemp from the DEA's schedule of Controlled Substances, making hemp completely legal for licensed farmers to grow, cultivate, and use
- Because marijuana is still federally illegal, waste created from processing marijuana plants must be handled differently than waste created from processing hemp plants

- Waste from hemp plants have many more commercial uses

POTENTIAL USES OF HEMP AND HEMP WASTE MATERIALS

For hundreds of years, hemp was grown to make everything from building materials to textiles. Rope made from hemp was especially useful in boats and ships worldwide because it was salt resistant. And, archaeologists in India discovered a building material, which was composed of hemp and lime, helped preserve the Ellora Caves for more than 1,500 years.

As a crop, industrial hemp is sustainable, low maintenance, and incredibly versatile. It can even thrive in infertile soil conditions, and it can be used for crop rotation to regenerate soil, because of its ability to cleanse the soil.

Every part of the hemp plant can be used — stalks, seeds, leaves and flowers. So, industrial hemp has wide-reaching growth potential that is now beginning to be embraced and utilized. A year before the federal government passed the 2018 Farm Bill removing hemp from the DEA's list of controlled substances, New York State had already invested $5 million into kick-starting the industry. Other states like Michigan and Kentucky have also invested money into this burgeoning industry.

According to data in a report from the Congressional Research Service, sales from hemp-based products reached more than $688 million in the U.S. in 2016, which was two years prior to passage of the 2018 Farm Bill. Here are some examples of ways industrial hemp can be used.

1. Hempcrete and hemp insulation

Many sectors are looking for more sustainable alternatives to lessen their environmental impact, including the construction industry. Hempcrete or hemp insulation is a lightweight, bio-composite building material made from hemp and lime. It has great thermal, structural and moisture-handling properties, and can be used for roof, wall or slab insulation, which has led to the use of hemp to replace fiberglass insulation. Some advantages it has over traditional concrete is it's less brittle, easier to work with and pound-for-pound stronger than steel.

2. Sustainable fabric

Hemp has been used for centuries to make various types of textiles. Today the fashion world is rediscovering industrial hemp as a natural product for making breathable and easy-to-wear garments. Organic hemp is considered one of the most sustainable fibers available, according to the Textile Exchange.

3. Clean cosmetics

For those looking for cleaner beauty products, cold-pressed hemp seed oil works well for moisturizing and soothing. Hemp shampoo is now widely available at many grocery stores and pharmacies, and it is also used in soap, lip balm and hand cream, among other cosmetics.

4. Vegan dairy products

Hemp milk is another product already available on supermarket shelves. This creamy, nondairy milk is made from hemp seeds which are soaked and ground in water. While most people will use this plant-based alternative in their coffee or cereal, others have taken it a step further making hemp cheese.

5. Hemp plastic

The cellulose from hemp stems can be used to make bioplastic. Hemp plastic can be biodegradable and compostable. Depending on its production, it can be 100% bio-based resin or a polymer. Compared to plastic made from fossil fuels, hemp plastic is a carbon-negative renewable resource.

6. Animal feed and bedding

Researchers at different universities around the country are studying hemp as a promising source of animal feed for livestock. At Kansas State University, researchers believe all parts of the hemp plant could be nutritious for cattle and a good source of crude protein. In another study, scientists at Oregon State University are exploring the potential for spent-hemp biomass as animal feed for sheep, cows and poultry. In 2021, the state of Montana approved the use of hemp and hemp-derived substances for commercial feed for pets, including specialty pets and horses.

With respect to animal bedding, many manufacturers of animal-related, retail products are beginning to sell hemp as animal bedding material. Hemp bedding is made 100% from hemp hurd (that's the center portion of the plant). Hemp hurd has a soft, warm feeling and can absorb up to four times its weight in moisture.

PROPER HANDLING AND POTENTIAL USES OF MARIJUANA WASTE MATERIALS

There are four different ways that cannabis operations can go about disposing of marijuana waste material: (1) in a permitted landfill; (2) composting; (3) in-vessel digestion; or (4) incineration.

1. Permitted Landfill Waste

- Most states require marijuana waste be made "unusable and unrecognizable" before it can be discarded in a landfill or otherwise disposed of.
- Many state regulations for the disposal of cannabis waste require the cannabis to be mixed at least 50%-50% by volume with non-cannabis waste in order to render the cannabis waste unusable and unrecognizable.
- Common sources of carbon-rich bulking agent include: wood chips, leaves, chopped straw, horse manure and bedding, shredded cardboard.
- Marijuana growers and processing companies must find **a landfill that accepts marijuana waste**.
- Landfills follow a class system depending on the amount of refuse they take per day (i.e., 20 tons or more).
- If the landfill does accept marijuana waste, that means that they have systems in place to prevent theft or misuse.

2. **Composting Marijuana Waste Material**
   - Marijuana plants overall are a leafy green, so composting their waste material is similar to composting other types of green waste.
   - Many state regulations for the disposal of marijuana waste require the material be mixed at least 50%-50% by volume with non-cannabis waste to render the marijuana waste unusable and unrecognizable.
   - Common sources of nitrogen-rich feedstocks include: shredded green-waste or grass clippings.
   - In most states where marijuana is legal, there are **recycling programs** that help compost the waste generated from cultivating and processing marijuana plants.

3. **In-Vessel Digestion**
   - In this case, a company can use a digester system to break down the marijuana waste to become unusable and unrecognizable.
   - This option only works for organic, marijuana by-products, such as soil and leftover plant parts.
   - The digester uses bacteria and other biological elements to digest the cannabis waste. Afterward, the remaining substance can be reused as compost or disposed of regularly since it no longer contains actual marijuana.
   - As with the landfill option, companies must work with **a permitted in-vessel digestion center**, or the business may be able to obtain their own digester, but they need to get permission for it first.

4. **Incineration**
   - The fastest and most cost-effective way to dispose of marijuana waste is to burn it.
   - However, manufacturers can't just toss some gasoline on a marijuana waste pile and light it with a match.
   - Instead, they have to work with **a licensed incineration company** or use a specialized incinerator.
   - Cannabis waste incinerators have two burn chambers to destroy all of the waste.
   - Since burning marijuana can potentially create a biohazard effect if THC, CBD, or other chemicals are released in the air, these machines have to isolate and burn off any remaining THC or CBD.
   - The final result is black ash, which can be disposed of normally.

REGULATORY AND COMPLIANCE ISSUES TO CONSIDER

1. **Most states require the grinding of all cannabis waste**
   - Two of the most commonly available tools for grinding cannabis waste include: (1) Chipper/shredders; and (2) Slow-speed grinders
   - Chipper/shredders are high-speed shredders that tend to throw chopped materials and generate loud noises while grinding. These shredders also tend to clog when shredding green or wet waste. Therefore, these grinders typically are slow and laborious for

cannabis waste. However, for generators of small amounts of cannabis waste, this may be one of the few affordable types of shredders available.

- A more ideal grinding technology for cannabis is a slow-speed grinder. These grinders excel at grinding of wet feedstocks and material that is difficult to shred such as fibrous stems. Plus the particle size is often smaller, which facilitates fast composting and creates a more attractive and consistent looking compost. The downside with slow-speed grinders is cost. They tend to relatively expensive, compared to garden-style chipper/shredders.

2. Cannabis Disposal Entities

- Create legislation that provides for licensing businesses that are involved in the commercial disposal or destruction of medical marijuana waster material. (See Title 15: Mississippi State Department of Health, Part 22: Medical Cannabis Program, Subpart 8: Cannabis Disposal Entities, Chapter 1 REGULATIONS FOR THE COMMERCIAL DISPOSAL OR DESTRUCTION OF CANNABIS AND/OR CANNABIS PRODUCTS)
- The cannabis disposal companies should be required to register with the Georgia Department of Health.